

October 15, 2003

Regulatory Division
CENAE-R-200202751

Dr. John Garofalo
Mariculture Unlimited, LLC
4 Crescent Avenue
Bridgeport, Connecticut 06608

Dear Dr. Garofalo:

This concerns your application, identified as Number 200202751, for a permit to install and maintain at total of 225 submerged longlines for the rearing of eastern oysters at three state administered shellfish lease areas totaling 522.4 acres in the nearshore coastal environment of Long Island Sound, off of the shoreline of Milford and Westport, Connecticut. We issued a Public Notice for the proposed activity on March 13, 2003, a Notice of Public Hearing on June 23, 2003, and convened a Public Hearing on the evening of July 23, 2003.

We have received comment letters from the U.S. Environmental Protection Agency and the National Marine Fisheries Service. I have enclosed copies of these letters for your consideration. In addition, we have received comments from various individuals and organizations in response to the proposal as illustrated and described within the Public Notices and as presented at the June 25, 2001 Public Hearing. A selection of these letters is also enclosed for your consideration. This is your opportunity to respond to the issues raised by the Public and the Federal Resource Agencies.

We require the following information in order to issue a revised Public Notice:

GEOGRAPHIC BOUNDARIES

1. Revised project plans that clearly depict the modified perimeter of aquaculture gear at both sites as identified below. These modified plans should be submitted as soon as possible and coordinated with the Corps to ensure that they are acceptable for issuance of a modified Public Notice.
2. Depiction and executive summary of proposed gear installation phases as discussed at the October 9, 2003 meeting.
3. In the plan (aerial) view of the long line arrays at each of the proposed sites, depict the dimensions of the perimeter in which the long lines would be deployed (including the proposed 100' buffer from the perimeter of the shellfish containment area), depict approximate configuration and provide proposed measurements between individual arrays, anchor lines and other adjacent upland or in-water features (piers, jetties, navigation channels etc.). Use NOAA/NOS charts (not topographic maps).

4. Describe and depict, for each site, your use of aids to navigation, and indicate how the proposed culture areas will be charted and the information disseminated to mariners to ensure appropriate caution is taken when motoring/sailing in the vicinity of the project.
5. Provide an accurate representation of the distance between the navigable fairways/aids to navigation and the perimeter of the long line arrays. Use NOAA/NOS charts (not topographic maps) and refer to the method of measure.

Please provide the information identified above as soon as possible to facilitate publication of a revised Public Notice.

Also, based on review of the above-referenced documentation and the discussion that transpired at our meeting on October 9, 2003, there are several outstanding issues that need to be resolved in order for us to complete our public interest review. These issues are identified below.

PROJECT PURPOSE AND NEED

1. Please provide justification for the scope (range of 288 – 523 acres) of the proposed aquaculture project. This should include a discussion of the economic feasibility of your commercial shellfish aquaculture venture and the area needed to meet or exceed desired production goals. Also, provide a comparison of the economic viability/practicability and level of productivity of a commercial aquaculture operation using long lines with that of a commercial aquaculture operation that will grow-out marketable size oysters within bottom cages. Is it feasible to utilize a combination of these rearing techniques to minimize the footprint of structures in the water?

EXISTING ENVIRONMENT

2. Describe the local wave climate/energies; current velocities and direction of net tidal drift; wave characteristics and seasonal patterns, and local tidal amplitudes (average and extremes) at the proposed project locations (also see item 7 below). Cite all information sources used.
3. Provide a more detailed characterization of the benthos at each of the proposed shellfish culture locations.
4. Provide more detailed documentation of the water depths at the proposed culture sites. Our records indicate that the depths you provided in the original and amended application overestimate availability of water to undertake installation of the gear, as proposed.

ENGINEERING / DESIGN STANDARDS AND OPERATIONAL CONSIDERATIONS

5. Provide design specifications for the long line systems. In particular, what structural design criteria will be used and what anchoring methods are proposed to keep the surface and subsurface structures in position (required depth) in the water column and/or out of adjoining waters such as navigable fairways and anchorage areas?

At a minimum the discussion should include the following information and be supported by a correspondingly labeled, cross-sectional plan view of the proposed retention system for each culture site:

- Amount and configuration of ballast necessary to ensure that adequate line tension is provided to maintain the subsurface gear a minimum of 8/10 feet below the water's surface (also include weight/specific gravity of sinking lines)
 - Diameter and tensile strengths of the proposed lines
 - The effect of drag (inertia water pressure) and shear (hydrodynamic friction) forces on the proposed gear when empty, at normal carrying capacity, and under expected loads of fouling organisms such as kelp
 - Ratio of water depth to horizontal distance of line from the gear to the ballast (anchor)
6. Has the configuration of the proposed gear been designed and approved by a certified marine engineer? If not, the design and calculations in support of the above discussion of specifications must be supplied and approved by a certified ocean engineer.
 7. Provide a wave analysis impact assessment to predict and demonstrate that the physical structures, material specifications, anchor design and configuration of the proposed long line arrays will be able to withstand local wind, wave and current conditions (both average and extreme) on a recurring basis at the sites selected?
 8. Explain your proposed contingency plan to recover lost gear and to mitigate potential adverse impacts if the submerged or surface gear breaks free during a major storm event, or as a result of other unpredictable circumstances, and causes harm to either life or property?
 9. We anticipate the need for you to secure a surety bond to ensure the performance of the aquaculture gear and protect the public in the event that the aquaculture gear breaks loose and/or to cover the costs of gear removal and site restoration should the site be abandoned. Provide a discussion of Mariculture Unlimited LLC's ability to provide the necessary securities and identify an amount that reasonably reflects the costs identified above.
 10. If the proposed long lines are permitted, how do you intend to provide field verification, for compliance purposes, of the submerged gear's location and depth in the water column?
 11. Provide a discussion of the seasonality of operation of the gear by site and by type. For example, discuss which gear, if any, is proposed to be removed during certain phases of shellfish life history or during the winter or summer seasons. Also indicate which gear type by location will remain in place year round.

NAVIGATION

12. Provide a discussion of the compatibility of the aquaculture project with recreational sailing and organized racing events, including the impact to known recreational racing areas, including those of Cedar Point Yacht Club and Housatonic Boat Club.

13. Provide a detailed discussion of the impact of the proposed aquaculture project on access to the Saugatuck Harbor navigable approach.

ENVIRONMENTAL IMPACTS

14. Identify all environmental impacts (short term and long term) that might be associated with implementation of the culturing activity. Identify any secondary or cumulative impacts to resources such as water quality, fisheries, habitat, protected species, access or conflicts with multiple uses at the culture sites.
15. Both Cedar Beach and Laurel Beach are popular recreational fishing areas, regularly fished for bluefish, striped bass, winter flounder, fluke and blackfish. How will the proposed activity affect recreational trolling and the ability of recreational fisherman to anchor in pursuit of this activity? What measures can be undertaken to minimize conflicts with recreational users?
16. Discuss your plan for the removal and disposal of bio-fouling organisms and your proposed project tending, gear inspection and maintenance cycle (indicate frequency and method of structural maintenance).
17. Will any commercial fisherman be displaced by the proposed activity? If yes, how many and what type (lobsterman, nearshore trawl etc.). What measures have you taken to avoid and minimize/offset the impact of such displacement at each of the sites?
18. Discuss any other mitigation measures to eliminate, reduce or compensate for adverse impacts associated with the proposed project. In addition, identify and describe those actions or activities that cannot be fully mitigated through actions by you regardless of the measures taken to eliminate or reduce them.

MISCELLANEOUS

19. Provide the Corps with a complete copy of the information submitted to the CT DEP on June 26, 2003 in response to the CT DEP OLISP's April 17, 2003 request for additional information.

Finally, to aid you in the preparation of your application we are supplying several pieces of information for your use. These documents are listed below:

- The Environmental Impacts of Aquaculture (NOAA, NMFS)
- Scoping Outline for Documentation of Aquaculture Activities Proposed in Estuarine and Saline Waters of the Northeast United States From Maine Through Virginia (NOAA, NMFS)
- Transcripts of the July 23, 2003 Public Hearing held in Milford,

Connecticut (Prepared for ACOE)

Please respond to this request for additional information in writing by December 15, 2003. If we do not hear from you by this date your application will be withdrawn and returned to you.

Please remember that you must also obtain any state/local licenses or approvals and state water quality certification and that no work within our jurisdiction may be started until you receive a permit signed by our District Engineer or his authorized representative.

If you have questions or wish to arrange a meeting, please contact Cori M. Rose of my staff at (978) 318-8306.

Sincerely,

Robert J. DeSista
Chief, Permits & Enforcement Branch

Enclosures

Federal Agency Comment Letters
Selected Letters of Public Comment
Environmental Impacts of Aquaculture
Scoping Outline for Aquaculture Activities
Transcripts of Hearing

Copy Furnished:

CT DEP, OLISP
Attn: Mr. Peter Francis
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